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EUROPEAN PATENT APPLICATION

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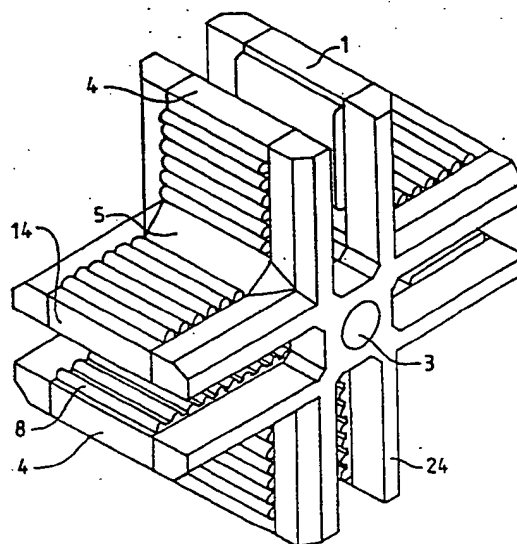
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54 Releasable connector.

57 A releasable connector for panels, e.g. to create a display structure for shopfitting includes a receiving member 1 having angled slots each for receiving a panel, presented edge-on. A retaining member 14 in the form of a wedge is associated with each slot and is inserted to bear on the edge region of the inserted panel to grip it. The wedge has a latching mechanism enabling it to retain its inserted location and is guided by guide slots in the receiving members. Complete removal of the wedges is prevented to avoid loss.



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from the structure; removal of one panel may involve the partial or complete dismantling of the whole structure. The use of brackets and screws produces a more stable structure in which individual panels can be removed without disturbing the rest of the structure. Since the brackets are usually made from metal these connectors are more prominent than transparent plastics connectors, and can be unsightly.

In many circumstances a suitable screw driver may not be readily available, and the screws may become damaged or lost. Such factors can result in an imperfect installation, or at least create a nuisance for an inexperienced person attempting to assemble the structure.

The present invention seeks to provide a connector, which overcomes at least some of these disadvantages.

Accordingly, the present invention provides a releasable connector for making an edge-on connection to a panel, comprising;

a receiving element having locating means for receiving and locating a presented edge region of a panel, and

a retaining member adapted for sliding

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In one embodiment, the receiving element includes a respective guide portion associated with each slot, and each retaining member comprises a pair of resilient jaws, the connector being assembled by the
5 sliding insertion of the jaws over the guide portion and thereby urging one of the jaws against a previously located panel.

Embodiments of the invention will now be described, by
10 way of example only, with reference to the accompanying drawings. In the drawings.

Figure 1 is an isometric view of an assembled 4-way
15 connector in accordance with the invention;

Figures 2a and 2b are cross-sectional views on an enlarged
scale of part of the connector of Figure 1 illustrating
successive stages in the assembly of the connector.

20 Figure 3 is an exploded view of the connector illustrating its components;

Figure 4 is a perspective view of two parts of a
receiving element of an alternative form of connector
25 in accordance with the invention;

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it. These ribs increase the frictional engagement of the surface against a received panel.

5 The outward end of each ledge 5 includes an overhanging projection 9 extending across its upper outer edge; this is most clearly shown in Figures 2a and 2b. The outer surface 10 of the projection is perpendicular to the under surface 2 of the limb, and the under surface 11 of the projection 9 slopes obliquely. The rear surface 12 of the overhanging projection is generally perpendicular to its under surface 11 spaced from the main forward surface of the ledge 5 by an obliquely sloping undersurface 13.

15 The connector also includes four retaining members 14. Each retaining member 14 has a general shape similar to that of the limbs 4 so that it interfits with a ledge 5 and extends into general correspondence with the opposing limb 4. A projecting rectangular portion 15 of the retaining member faces the slot.

25 The retaining member includes within it a cavity 16 opening at the inner end of the retaining member via an oblique cavity 17. The portion 18 of the retaining

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member includes an angled socket 26 for receiving one
of the lateral wings 23 projecting from the retaining
member. The sockets 26 are longer in extent than the
wings 23 and limited translational movement of the
5 retaining members can be accommodated.

In a typical application, several of the connectors
are used to connect panels of tempered glass of 5mm
thickness to form a display stand of cubic cells. To
10 use a connector, the retaining members are initially
disengaged and moved outwardly from the receiving
element 1 until the wings 23 are stopped by the
closed ends of the sockets 26. In this position,
shown in Figure 2a, the base surface of the retaining
15 member is approximately co-planar with the under
surface 2 of the ledge 5. The edge of a glass panel
is introduced into the slot formed between the two
limbs. The retaining member is then pushed inwardly,
and the slope of the socket 26 causes the portion 15
20 at the base of the retaining member to bear on the
glass in a wedge-like action. The retaining member is
squeezed to force the head of the hook portion 20
beneath the overhanging projection 9 from the forward
end of limb 5. The sloping surfaces of the neck
25 portion 21 and the overhanging projection assist the

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receiving element is manufactured in two halves 40a and 40b by injection moulding; these halves being joined together via a rectangular-sided spigot 42 on one half locating in a corresponding socket in the other. One of the limbs 43 in each pair provides a generally rectangular planar surface 44 forming one side of the slot. The other limb 45 of each pair comprises two edge portions 46 spanned along part of their length by a guide portion 47 shaped to receive and guide a separate retaining element 48. The guide portion 47 has one surface 48 facing into the slot which is generally planar and slopes towards the slot from the outer end of the guide portion 46. The surface 49 joins the central spine of the receiving element 40. On its surface facing away from the slot the guide portion 46 is shaped to provide outer and inner humps 50 and 51, the outer hump having a bevelled outward end. At its inward end the inner hump 51 has an undercut surface 52 which abuts a hook on the retaining member when the connector is fully assembled.

Each retaining element 48 is generally cuboid in outline but is deeply slotted to provide two jaws 53 and 54 for most of its length. One jaw 53 has an

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the connector. One of each pair of limbs of the receiving element 60 includes further slots 62 parallel to the slots 26. The retaining member 61 includes further wings 63 parallel to the wings 23 and rearward thereof. The wings 63 engage in the further slots 62.

The limbs 4 of the receiving element 60 includes a pvc pad 64 fitted as a dovetail insert into the engagement surface of the limb 4 so that it projects above that surface. The softness of the pvc allows it to be compressed when a retaining member is fitted and it gives additional friction. The presence of the pad 64 enables the remainder of the material of the receiving element 60 to be made of a harder material than would otherwise be acceptable.

At the rear end surface of each retaining member 61 a transverse slot 65 is included. This slot enables a user to insert his fingernail or a coin and assists in preventing slippage onto the glass panel.

It will be appreciated that many accessories may be used in association with the connector. These may be

CLAIMS

1. A releasable connector for making an edge-on connection to a panel, comprising:

5

a receiving element having locating means for receiving and locating a presented edge region of a panel, and

10

a retaining member adapted for sliding movement with respect to the receiving element, such that it may be slid to a position at which it bears on a presented panel, and including releasable latching means operative to engage the receiving element when the retaining element is slid to said position.

15

2. A releasable connector as claimed in claim 1 wherein the locating means comprises a slot defined by the receiving element.

20

3. A releasable connector as claimed in claim 1 or claim 2 wherein the latching means comprises a hook portion of the retaining member which by resilient

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7. A releasable connector as claimed in any one of the preceding claims wherein the receiving element and retaining member include mutual engagement means acting to prevent the complete removal of the retaining element when released from the position at which it bears on a presented panel.
8. A releasable connector as claimed in claim 7 when dependent on claim 5 wherein said mutual engagement means comprises a stop at one end of said angled slot preventing further relative movement of the complementary projection.
9. A releasable connector as claimed in any one of the preceding claims including a plurality of said receiving elements forming a receiving body and a corresponding number of retaining members, thereby enabling several panels to be interconnected.
10. A releasable connector as claimed in claim 9 wherein said receiving elements are angularly disposed.

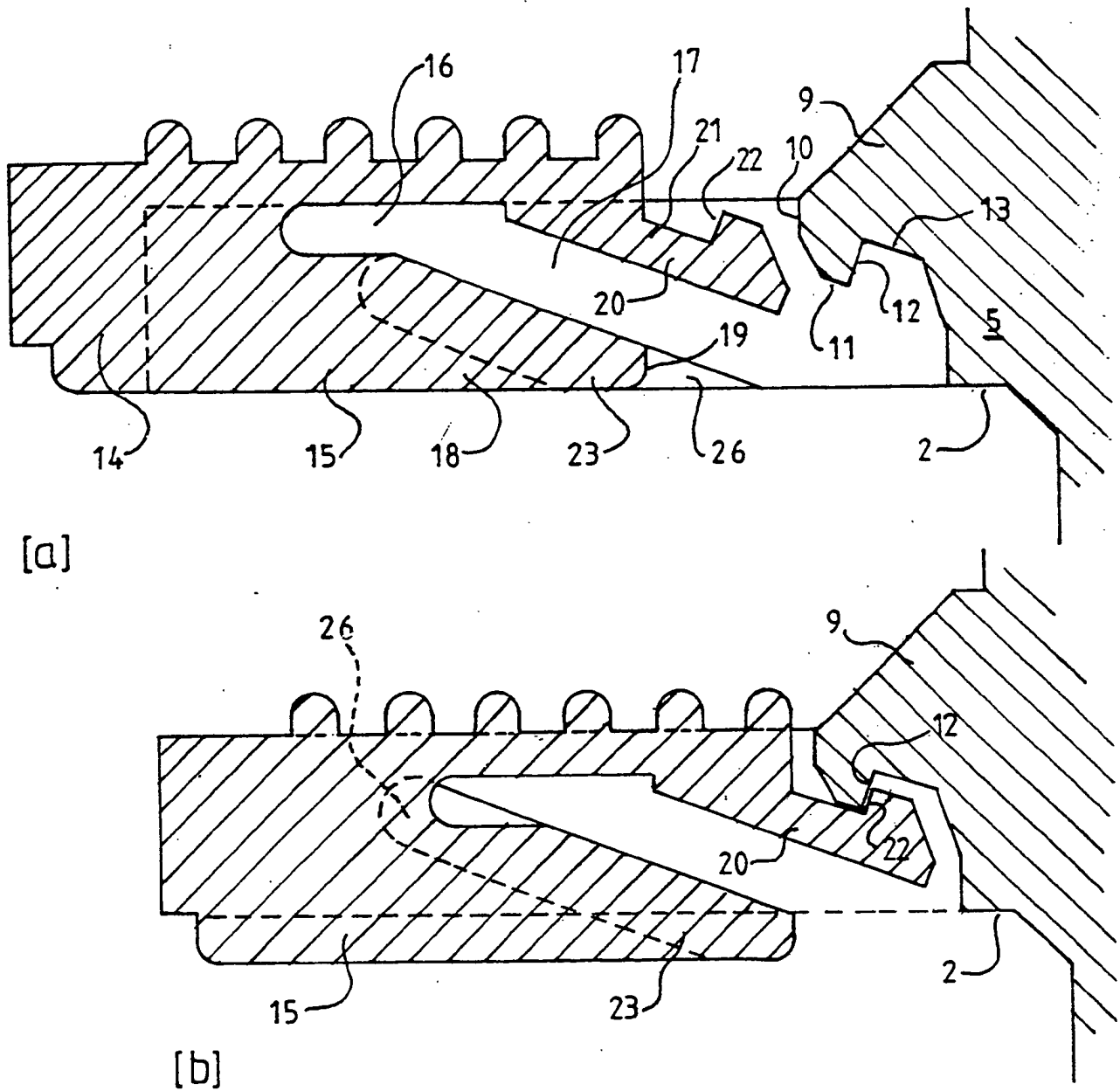


Fig.2

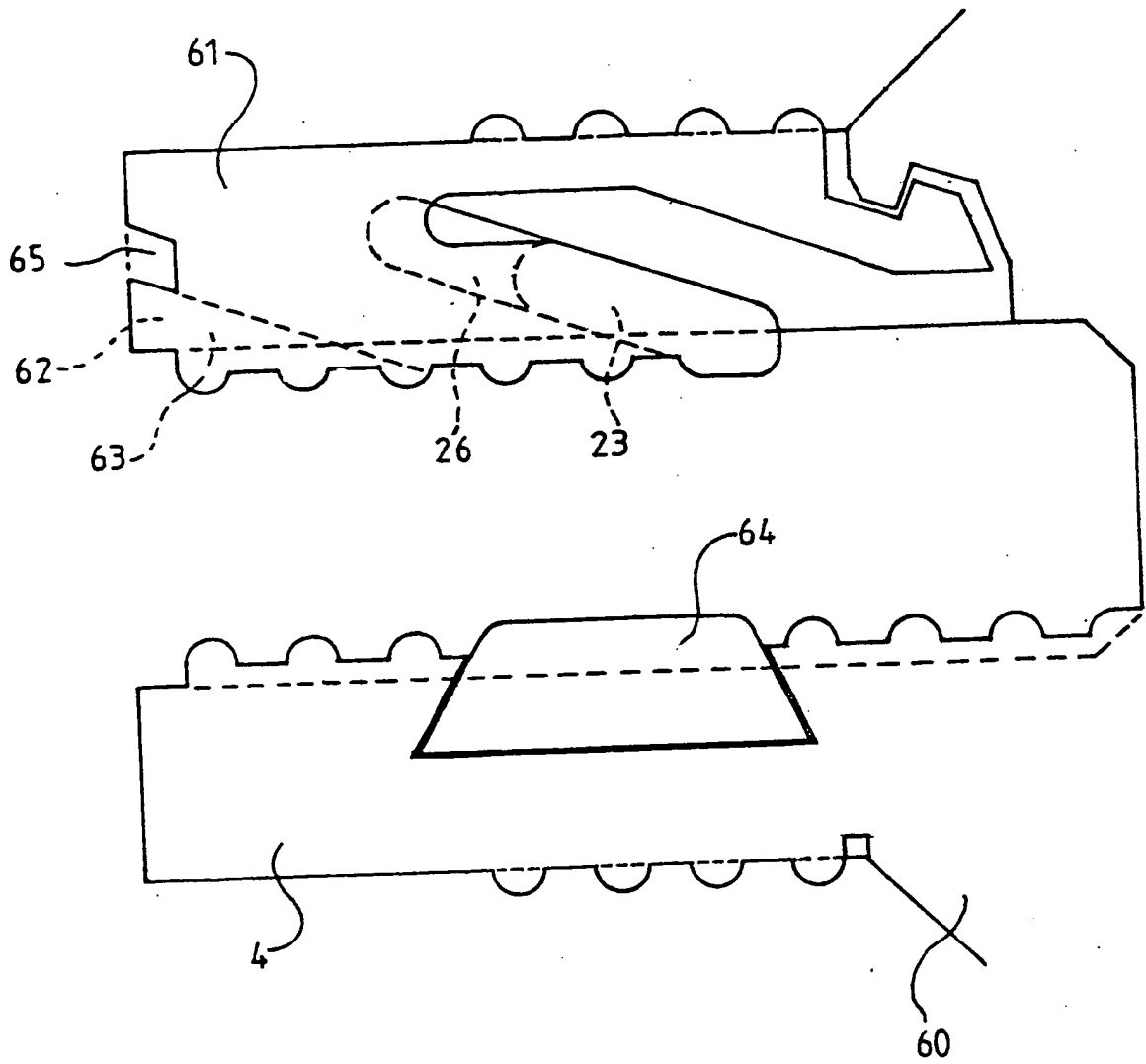


Fig. 8

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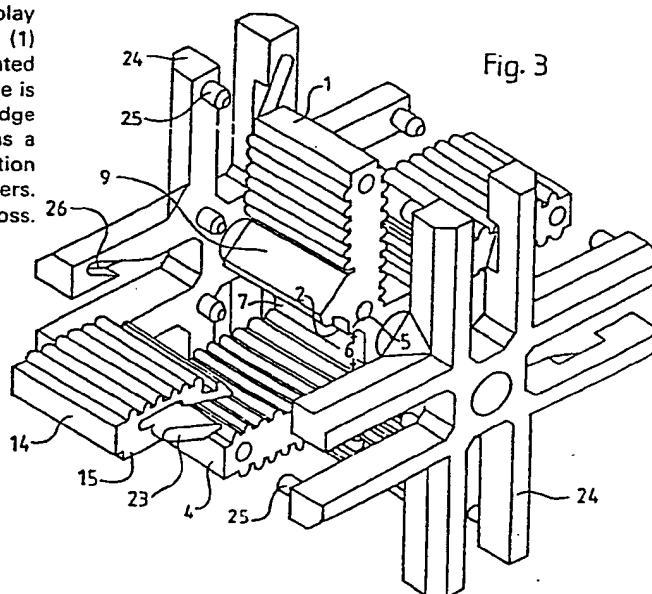


Fig. 3

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